REMARKS

In the most recent Office Action dated September 29, 2003, the Examiner has rejected claims 1-5, 7-13, 15-17 and 19-30 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,005,122 to Griffin et al. ("Griffin") in view of U.S. Patent No. 5,276,867 to Kenley et al. ("Kenley"). The Examiner also rejected claims 4-30 under 35 U.S.C. 103(a) as being unpatentable over Griffin and Kenley in view of U.S. Patent No. 4,995,035 to Cole et al. ("Cole"). The applicants amend dependent claim 7 according to the Examiner's suggestion and to more fully claim aspects of the present invention. For at least the reasons set forth below and discussed at the interview, the Applicants respectfully assert that the pending claims are patentable over the prior art of record and request their allowance.

As a preliminary matter regarding the Examiner's objection to informalities believed to be in claims 4 and 7-12 with respect to a "first manager component" and a "second manager component" not referenced in the specification or drawings, the applicants respectfully disagree. Support amply exists in both the specification and the drawings for at least a first manager component and a second manager component. A first manager component in a first backup cell is referenced on page 9 at line 5 ("a manager component 114") and a second, different manager component in a second, different backup cell is referenced on page 9 at line 16 ("a manager component 164"). Indeed, on page 9 at lines 17-19, the specification further distinguishes separate identity between the two manager components indicating that "the manager component 164 [of the second backup cell 150] is similar in operation and functionality to the manager component 114 in the [first] backup cell 100." The drawings

for Fig. 1 contain similar and consistent references to these two different manager

components 114 and 164. Two or more manager components depicted in Figs. 2-3 are

also similarly supported by the specification on page 15 at lines 1-2 and on page 17 lines

9-12 respectively. The lack of arbitrary labels "first" and "second" in these clear

references to two or more components is inconsequential. As such, the applicants assert

no correction is necessary to support a first manager component and a second manager

component in claims 4 and 7-12.

With respect to the prior art cited in the most recent Office Action, the

Examiner cites Griffin Col. 1, lines 41-45 and Col. 2, lines 10-30 as support that Griffin

teaches at least two backup cells. The applicants respectfully disagree.

At Col. 1, lines 41-45, Griffin indicates that "each computer is a node" and

that "nodes may be provided which store and manage databases or other data files on

mass storage devices, or which manage printers or links to the public telecommunications

network. At Col. 2, lines 10-30, Griffin discusses backup of individual nodes and the

consequences that a non-functioning node has on backup procedures. Given the very

limited way in which Griffin discusses "nodes" as further explained below, Griffin fails

to provide any teaching or suggestion of backup cells whatsoever.

Griffin is limited to a specific architecture that only discusses client/server

backup arrangements in terms of "nodes". (Col. 7, lines 32-37) In Griffin, each "node"

comprises a computer and nodes are either client nodes or server nodes. (Col. 1, lines 41-

43; Col. 2, lines 34-42) A "node" in Griffin is therefore an atomic network element

comprising a single individual computer.

A backup cell, by contrast, is not limited to installation on a single device and can, in some embodiments, be configured to include a plurality of network devices including a manager hardware or software component responsible for maintaining backup parameters of the backups in the backup cell and initiating a backup policy for the attached network computing devices according to those parameters. Further, a hierarchy of backup control for the system can be realized through the interaction of manager components in different backup cells. Manager components in one backup cell can directly control components in other backup cells without limitation. Thus, a backup cell can contain multiple devices and is generally part of a greater hierarchy of backup cells. A backup cell cannot be equated with a "node" in Griffin as the Examiner suggests.

In addition, Griffin also does not contain any teaching or suggestion of each of a plurality of management servers being able to control the other. Indeed, Griffin instead discusses a top-down hierarchy that contains a master management server which enables a slave management server to provide management services. The slave management server is not conversely able to control the master management server. This architecture significantly limits the scalability and flexibility of the system. (Col. 7, lines 13-31)

With respect to Kenley, there is no suggestion to combine Kenley's teachings with those of Griffin. Kenley discusses a Mount Queue Manager ("MQM"). However, the MQM is solely directed to mounting requested volumes, scheduling usage of the removable media, and volume allocation, de-allocation, and access control. (Col. 5, lines 36-39 and lines 57-63) The MQM is thus a component of limited functionality that is purely directed to facilitating physical aspects of backups on storage media. The

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MQM does not control the backup of data itself to the backup device. Further, there is no teaching or suggestion that the MQM is part of a backup cell. Griffin and Kenley are thus directed to different aspects of backup technology and neither reference contains a suggestion or motivation to combine with the other.

With respect to Cole, there is also no suggestion to combine Cole's teachings with those of Griffin. Cole discusses cross-domain zones of control in a network using focal point nodes. (Col. 1, lines 55-68) Cole is directed to segmenting network topologies and not to hierarchically organizing a storage network. Nowhere does Cole discuss storage-related operations such as backup operations using backup cells. There is thus no suggestion or motivation to combine Cole with the backup technologies discussed in Griffin and Kenley.

Thus, the prior art does not disclose or suggest, as set forth in applicants' claim 1, a backup and retrieval system for a network computing system comprising: at least two backup cells each comprising a backup device executing a backup of the data stored on at least one group of network devices, a management component controlling the backup of the data to the backup device and each of the plurality of backup cells communicatively coupled to at least one other of the plurality of backup cells, and each of the plurality of backup cells adaptable to be controlled by a management component in another of the plurality of backup cells. For at least the above reasons, and as further discussed in the interview, claim 1 is patentable over the cited art.

Further, Griffin does not contain any suggestion or teaching of a first management server directly controlling a backup device controlled by a second management server. Instead, in Griffin, a master management server control backup

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devices by passing commands through and using a slave management server. As one

consequence, if the slave management server fails, the master may be unable to control its

backup devices. This also limits the scalability of the system.

Thus, the prior art does not disclose or suggest, as set forth in applicants'

claims 4, 10, and 16, a backup and retrieval system for a network computing system

including a second manager component, in addition to a first manager component,

directly controlling the backup of the data to the at least one backup device. In addition

in claim 4, the first manager component and the second manager component are part of

backup cells. For at least the above reasons, and as further discussed in the interview,

claims 4, 10, and 16 are patentable over the cited art.

Similarly, the prior art does not disclose or suggest, as set forth in

applicants' claim 20, a backup and retrieval system for a network computing system

comprising: a plurality of backup cells comprising a backup device executing a backup of

data stored on at least one of a plurality of network devices, a management component for

controlling the backup of the data to the backup device, whereby the first backup cell is

capable of being controlled by a management component in the other backup cell. For at

least the above reasons, and as further discussed in the interview, claim 20 is patentable

over the cited art.

In addition, absent from Griffin is any teaching or suggestion of a backup

management component present on any network device other than a server node. Griffin

is limited to a specific architecture and only discusses client/server backup arrangements.

In Griffin, each operational mode of this rigid server/client architecture limits

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implementation of management components to server nodes. The present system, by contrast does not so limit where a management component may reside.

Thus, the prior art does not disclose or suggest, as set forth in applicants' claim 23, a backup and retrieval system for a network computing system, the network computing system comprising a plurality of network devices storing data, the backup and retrieval system comprising one or more backup cells comprising: a client component, configured to reside on and execute on any network device including a second network device and communicatively coupled to at least one media component, directing the media component to backup the data according to operational parameters established by the client component; and a management component, configured to reside on and execute on any network device including a third network device and communicatively coupled to at least one client component, directing the client component to backup the data according to backup parameters of the backup cell established by the management component; a backup device executing a backup of the data stored on at least one of the plurality of network devices; a media component, configured to reside on and execute on any network device including a first network device, communicatively coupled to at least one backup device for controlling the backup of the data to the backup device. For at least the above reasons, and as further discussed in the interview, claim 23 is patentable over the cited art.

Thus, Griffin does not disclose or suggest, as set forth in applicants' claim 27, a backup and retrieval system for a network computing system, the network computing system comprising a plurality of network devices storing data, the backup and retrieval system comprising: a plurality of backup cells comprising: a management
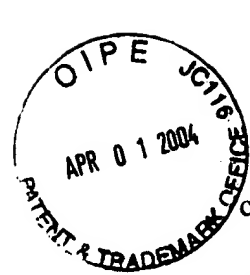
component, residing on and configured to run on any network device and communicatively coupled to at least one backup device, for controlling the backup of the data to the backup device; and a backup device executing a backup of the data stored on at least one of the plurality of network devices. For at least the above reasons, and as further discussed in the interview, claim 27 is patentable over the cited art.

The dependent claims of the present application contain additional features that further substantially distinguish the invention of the present application over Griffin, Kenley, Cole, and the other prior art of record. However, given the applicants' position on the patentability of the independent claims, it is not deemed necessary at this point to delineate such distinctions.

For at least all of the above reasons, Applicants respectfully request that the Examiner withdraw all rejections, and allowance of all the pending claims is respectfully solicited. To expedite prosecution of this application to allowance, the examiner is invited to call the applicants' undersigned representative to discuss any issues relating to this application.

Respectfully submitted,

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I hereby certify that the correspondence attached herewith is being transmitted via First Class Mail to the Commissioner for Patents, Alexandria, VA 22313.

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